

CENTRAL INTELLIGENCE AGENCY
INFORMATION REPORT

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REPORT

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This is UNEVALUATED Information

THE SOURCE EVALUATIONS IN THIS REPORT ARE DEFINITIVE.
THE APPRAISAL OF CONTENT IS TENTATIVE.
(FOR KEY SEE REVERSE)

1. At the first meeting in 1955 of the Working Group for Electrical Regulators of the Working Circle for Industrial Measurement and Control Technology, held on 20 January 1955 in the Chamber of Technology Building, Berlin W 8, Kronenstrasse 18, the following men were present:

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a. Kupfer (fnu)	EKE Suhl (sic)
b. Seifert (fnu)	EKE Suhl
c. Hornauer (fnu)	GRW Teltow (VEB Gerate- und Regler-Werke)
d. Ludwig (fnu)	GRW Teltow
e. Dr. Illgen (fnu)	Zeiss-Jena
f. Barth (fnu)	Elektro-Apparate Werke (EAW), (J. W. Stalin Plant), Berlin Treptow
g. Dr. Reinhold (fnu)	EAW
h. Boecking, Gerhard	Wissenschaftliches u. technisches Bureau fuer Geratebau (WTB/G)
i. Wolter (fnu)	WTB/G
j. Schuls (fnu)	WTB/G
k. Klanka (fnu)	WTB/G
l. Zeibig, Horst	Funkwerk (FW) Leipzig
m. Marthiens, Waldemar	FW Koepenick
n. Schieferdecker, Friedrich	FW Koepenick
o. Iser, Friedrich	FW Koepenick

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a. Control Motors and Tachometer Machines

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1) DC Motors

- a) After introductory remarks by Kupfer concerning the objective and scope of the work being carried on at Suhl, Seifert reported on

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(Note: Washington distribution indicated by "X"; Field distribution by "#".)

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results obtained to date, particularly concerning the investigation of stresses occurring in the motors due to increased heating caused by harmonics. At the beginning of February 1955, similar studies were to be initiated with the inclusion of magnetic amplifiers. At this point, Hornauer added that a 60 W two-phase induction motor had operated satisfactorily with a magnetic amplifier from GRW.

- b) The decision was that a motor with a double field winding should be designed and that each field winding should be constructed for continuous operation alone. In motors up to 300 W the armature voltage should not exceed 300 volts. The question of noise generation was left unsolved.
- c) For larger motor types forced draft air cooling appeared best. Kupfer reported that in Suhl tests were carried out on motors up to 300 W only, and that the WTB/G in Dresden (Watzula) was responsible for tests on larger types. Close cooperation between both organizations would be attempted.
- d) In a discussion on moment of inertia, Kupfer suggested a relationship of armature length to diameter of from 0.8 to 1.3 (sic). He advised that this relationship be greater than 1.

2) Miniature Motors

No data had been given to Iser on this subject. Requests pertaining thereto should be submitted to Iser as soon as possible.

3) Integrating Motor

- a) Since the last meeting, inquiries concerning the integrating motor had been received from additional interested parties and the development of the integrating motor was definitely recommended. Agreement was reached that the work should be done at EKE Suhl. FW Koepenick gave Suhl a model of the former integrating motor type LGW. The desired temperature range will be retained at -60 to +40 degrees.
- b) A resolution was passed that requirements on technical data should be submitted by Zeiss-Jena, WTB/G, and FW Koepenick by 15 February 1955.

4) AC Motors

A comparative test will be carried out on a condensor motor, a hysteresis motor and a Ferrari motor by EKE Suhl in conjunction with FW Koepenick. During these tests the necessity of limit switches will also be considered. Concerning the development of Ferrari motors at FW Koepenick, Schieferdecker reported that the first models of the 20 W motors should be completed by the middle of 1955 and the first models of the 60 W motors by the end of 1955. These motors are urgently needed for the tests.

5) DC Tachometer Machine

- a) Iser reported on the discussion with Kupfer from Hartha. EKA KE (sic) Hartha has stated that they were prepared to carry out the development of tachometer machines for regulation purposes. A subcontract will be given to Hartha by EKE Suhl. For the present, only high ohmic types (for electrical regulators) will be developed because types now available are sufficient for regulations with magnetic amplifiers.
- b) WTB/G reported that tachometer machines had also been developed by them. A model and technical data would be submitted to Iser.

Resolutions included:

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1. Information on the technical data required from FW Leipzig will be submitted to Iser by 15 February 1955.
2. Iser will approach EKA EE Hartha with the request that ERS sheets (ERS Blaetter) be prepared on presently available tachometer machines.
3. EAW will then prepare the projected ERS sheet for a 500 W tachometer machine.

6) AC Tachometer Machine

- a) Before the next meeting, Schieferdecker will prepare a technical and economic comparison of a condensor tachometer machine with Ferrari tachometer machines, including a consideration of the prices for the same number of each type produced.
- b) Before the end of March 1955, EKE Suhl will investigate the possibility of utilizing a condensor motor as a tachometer machine.

7) AC Commutator Motor

- a) The discussion with Kegel of GRW will be carried out in the near future. Hornauer will report on the results at the next meeting.

8) Bushhold Regulator

- a) EKA EE Hartha inquired of Iser concerning cooperation with GRW. GRW will immediately contact EKA EE Hartha on this question.

b. Electronic Equipment Meeting

- 1) Wagner reported on the exchange of correspondence with Prof. Georg Mierdel. The suggestions concerning the conduct of the meeting were approved. Wagner was assigned the preparation of details of the meeting which, in view of the Leipzig Exposition, will be held in the second half of March 1955. Zeibig and either Barth or Hoenig agreed to deliver short reports.
- 2) The suggestion was made that a meeting be held to discuss transistors, semi-conductors, rectifiers, etc.

c. Vacuum Tube Questions

- 1) At the electronic equipment meeting the development of high power output tubes and long-life tubes, which has been sponsored by FW Leipzig and EAW, will be discussed.
- 2) FW Leipzig complained that ignitrons type 30 A, already included in the EAW catalog, were not available. Dr. Reinhold replied that the problem of heat dissipation had not yet been solved. Zeibig stated that he would agree to increased cooling by blowers.
- 3) A resolution was made that the availability of the ignitrons type 30 A be resolved as rapidly as possible.

d. Rotary Converter for Test Purposes

- 1) Wolter of WTB/G assumed responsibility for this report. In the near future he will make inquiries on this subject at the various developmental points.

e. Design Questions

- 1) Marthiens reported on attempts to standardize the switch boxes. Although such a standardization is urgently needed, he warned against carrying out such a step in haste.
- 2) Marthiens will hold a meeting at FW Kopenick on this subject. This

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meeting will be attended by:

- a) EAW
- b) Askania, Teltow (GRW) Gladbach (fnu)
- c) Energieprojektierung Henkel (fnu)
- d) VEM Berlin Jahn (fnu)
- e) RFT Anlagenbau, Berlin Ludwig (fnu)
- f) RFT Anlagenbau, Cottbus Star (fnu)

f. Miscellaneous

- 1) Wagner reported that a coordinating meeting will be held on 27 January 1955 at 1030 hours in FW Koepenick on the following projects:
 - a) Electrical wave at FW Leipzig,
 - b) Stabilized platform at WTB/G,
 - c) High accuracy sequence regulator at FW Koepenick.
- 2) Zeibig reported on difficulties encountered in the development contracts for 1955. Despite the agreements reached in the Working Circle and the thorough discussion of the contracts with ZAFT, in the presence of representatives of the Working Circle for Industrial Measurement and Control Technology, provisos had been made which resulted in delays in the progress of the work. For example, the development contracts for inverted converters operating on an electronic basis contained an agreement with a firm which produced vibrators. The Working Circle must take steps to prevent such delays in the future.
- 3) Hornauer reported that the periodical Measurements, Regulators, Controls (Messung, Regeln, Steuern) will appear beginning 1 July 1955.
- 4) The next meeting, the special electronic equipment meeting, will be held at the end of March 1955.

3. Copies of the minutes were distributed as follows:

ZAFT (Roehl)
 Ministry for Machine Construction, Main Administration for Radio and Communications Technology
 Ministry for Machine Construction, Precision Mechanics and Optics
 Ministry for Machine Construction, Main Administration for Peoples' Owned Enterprises, Machine Construction
 EKE Suhl (Kupfer)
 WTB Dresden (Watsula)
 Working Circle for Industrial Measurement and Control Technology (Britall)
 GRW Teltov (Hornauer)
 EAW (J. W. Stalin Plant) (Barth and Ulbricht)
 VEB FW Leipzig (Zeibig)
 VEB Measuring Equipment Plant, Quedlinburg (Haertling)
 VEB Gaselan (Reichert)
 WTB/G Lichtenberg (Boecking, two copies; Wolter)
 Measuring Instrument and Equipment Plant "Karl Marx", Magdeburg (Mueller)
 VEB Carl Zeiss-Jena (Illgen)
 FW Koepenick (Marthiens, Schieferdecker, Wagner, Iser)

Comment. Watsula (fnu) of WTB Dresden was unable to attend the meeting.

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Comment. The meeting was later postponed until 2 February 1955.

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